

REMARKS

In the Office Action of July 11, 2006, the Examiner noted that claims 1-11, 25, 26, 28 and 29 were pending, but claims 4-11 had been withdrawn; claims 1-3, 25, 26, 28, and 29 were rejected under 35 U.S.C. § 101; claims 1-3, 25, 26, 28 and 29 were rejected under the first and second paragraphs of 35 U.S.C. § 112; and claims 1-3, 25, 26, 28 and 29 were rejected under 35 U.S.C. § 102(b) as anticipated by an article by Salgado et al. (Reference U). Claims 31-33 have been added. The rejections are traversed below.

Rejections under 35 U.S.C. § 112, Second Paragraph

In items 4 and 5 on pages 2-3 of the July 11, 2006 Office Action, claims 1-3, 25, 26, 28 and 29 were rejected under the second paragraph of 35 U.S.C. § 112 as omitting an essential step and for being indefinite. In an attempt to overcome this rejection, an Amendment was filed October 11, 2006 adding limitations, because that was understood to be one of the reasons for the rejection. However, in response to the October 11, 2006 Amendment, a Notice of Non-Responsive Amendment was mailed December 20, 2006 which stated that the addition of operations and rewording of the limitations in response to the § 112 rejection changed the scope of the claim beyond "the elected invention". Therefore, the claims were further amended by the Amendment filed April 20, 2007. However, apparently the failure to include all of the remarks of the October 11, 2006 Amendment in the April 20, 2007 Amendment resulted in another Notice of Non-Responsive Amendment mailed July 6, 2007.

In response to the rejection in item 4 of the July 11, 2006 Office Action, the operation of "determining a ... gene expression site" (claim 1, line 8) has been expanded based on the description of this operation provided in the application, for example, on pages 12-16.

With respect to the rejection in item 5 of the July 11, 2006 Office Action, it is not understood how the Examiner could consider the term "gene expression site" in the claims to mean "the portion of the gene that is transcribed" (July 11, 2006 Office Action, page 3, line 10) in light of how the term is used in the application. The very first sentence of the application states that the invention is directed to "predicting gene expression sites of a gene whose expression site is unknown on a genome sequence." This statement and subsequent uses of the term "gene expression site" seem to be consistent only with the definition of "where the gene [is] expressed in an organism" (July 11, 2006 Office Action, page 3, lines 11-12).

For the above reasons, it is submitted that the amended claims meet the requirements of 35 U.S.C. § 112, second paragraph.

Rejections under 35 U.S.C. § 112, First Paragraph

In item 7 on pages 3-4 of the July 11, 2006 Office Action, claims 1-3, 25, 26, 28 and 29 were rejected under the first paragraph of 35 U.S.C. § 112 as not enabled by the specification. In response to this rejection, the preamble of the independent claims has been amended to recite that the invention is used "for supporting a user in predicting a gene expression site" (e.g., claim 1, lines 1-2). As described on page 15 and illustrated in Fig. 13, the method recited in claim 1 can be used to produce a list that assists a user in predicting a gene expression site.

It is submitted that contrary to the statements in the December 20, 2006 Notice of Non-Responsive Amendment, the amendment of the preamble should not change the scope of the claims beyond what was elected on April 3, 2006, because the word "predicting" in the preambles of the elected independent claims should not be so narrowly construed as to require that the entire prediction process is completed by the method recited in the claim. For example, the result of the "determining" operation of claim 1 as originally filed were "expression sites of the first gene" which inherently means that more than one site was determined. This is consistent with the list of expression sites illustrated in Fig. 13. It is submitted that amending the preamble of the independent claims to more clearly conform to what was recited in the body of the claims and disclosed in the specification should not result in claims that are not within "the elected invention" as asserted in the December 20, 2006 Notice of Non-Responsive Amendment. In issuing the December 20, 2006 Notice of Non-Responsive Amendment, the Examiner apparently used a definition for "the elected invention" that was unreasonably narrow.

For the above reasons, it is submitted that the amended claims meet the requirements of 35 U.S.C. § 112, first paragraph.

Rejections under 35 U.S.C. § 101

In item 9 on pages 5-6 of the July 11, 2006 Office Action, claims 1-3, 25, 26, 28 and 29 were rejected under 35 U.S.C. § 102 as directed a non-statutory subject matter for failure to recite a "tangible result." All of the independent claims now include a final operation of "outputting" (e.g., claim 1, last line), an example of which is illustrated in Fig. 13. Therefore, it is submitted that all of the claims are directed to statutory subject matter and withdrawal of the § 101 rejection is respectfully requested.

Request for Interview If Amendment Not Entered or § 101 or § 112 Rejections Maintained

Applicant has attempted to respond to the rejections under the first and second paragraphs of 35 U.S.C. § 112 and 35 U.S.C. § 101 without changing the scope of the claims

beyond what was elected on April 3, 2006. However, Applicant does not know what definition the Examiner is using for the scope of what was elected. It is submitted that Applicant should be permitted to amend the claims sufficiently to overcome the § 112 rejections without a finding that the claims are no longer directed to the elected invention, because it is improper for the Examiner to define the elected invention as a method that is incomplete or indefinite, or unsupported by the specification.

Therefore, if the claims as amended are deemed to be outside the scope of the "elected invention" or to not meet the requirements of 35 U.S.C. § 112, the Examiner is respectfully requested to contact the undersigned to arrange an Examiner Interview for the purpose of determining what language, if any, would be acceptable to meet both requirements, instead of issuing another Notice of Non-Responsive Amendment or another Office Action.

Rejections under 35 U.S.C. § 102(b)

In item 11 on pages 6-7 of the July 11, 2006 Office Action, claims 1-3, 25, 26, 28 and 29 were rejected under 35 U.S.C. § 102(b) as being anticipated by Salgado et al. which discusses using a "transcription unit" as the site to determine where a gene is expressed, rather than a cell, tissue or organ being the site used to determine where a gene is expressed as in the present claims. Further, Salgado et al. fails to teach

determining a first gene expression site, based on the distance, as a selected gene expression site of at least one of the second genes that has a predetermined distance relation with the first gene, the predetermined distance relation having been determined based on a sensitivity and a specificity

(e.g., claim 1, lines 8-11) as recited in all of the elected independent using these words or, in the case of claim 28, "determines" instead of "determining".

For at least the reason discussed above, claims 1, 25 and 28 and the claims dependent therefrom are patentably distinguishable from Salgado et al. Therefore, withdrawal of the rejection is respectfully requested.

New Claims

Claims 31-33 have been added to recite details of the invention disclosed in the application. Support for claim 31 can be found on page 10 of the application. Support for claim 32 can be found on pages 16-17 of the application, particularly Table 1. Claim 33 uses alternative wording to claim a method similar to that recited in claim 1. Therefore, entry of the new claims is respectfully requested.

Summary

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: October 9, 2007

By: /Richard A. Gollhofer/
Richard A. Gollhofer
Registration No. 31,106

1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501